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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,233	04/26/2000	Mark S. Ortiz	3001-0039	9714

38552 7590 04/06/2004

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EXAMINER

RAO, SHEELA S

ART UNIT PAPER NUMBER

2125

DATE MAILED: 04/06/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

# Office Action Summary

Application No.

09/558,233

Applicant(s)

ORTIZ ET AL.

Examiner

Sheela Rao

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. RCE and amendments filed January 14, 2004 has been received and entered.
2. Claims 1-29 are presented for consideration.

***Claim Objections***

3. Claims 1 and 21 are objected to because of the following informalities: both claims include a limitation directed to "a raw". Claim 1 states "a raw of switching sensors" while claim 21 states "a raw for each of said first carriages". Examiner assumes the use of "raw" as being a typographical error and interprets the claimed limitations as "a row ...". Appropriate correction or explanation is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Brian (USPN 4,005,349) in view of Prucher (USPN 4,633,148).

Brian teaches of a control system for a work-handling apparatus within a manufacturing environment. The conveying apparatus utilizes independent movable carriages along an aligned series. The patented invention discloses the work carriages as being mounted on rails or tracks that extend along a series of treating stations.

The limitations of the instant invention are taught by the reference of prior art with regard to claims 1 and 27-29 by the use of the independent movable carriages, a plurality of active elements to produce movement, a controller for controlling the activation of the elements, and a tool for performing the manufacturing operation as taught in column 9: lines 59, et seq. The tool as used by Brian is taught to be

an electrochemical plating apparatus, see column 10: line 20. Brian also teaches the plurality of rows of switching sensors at column 10: lines 37-44 and column 11: lines 5-8, with regard to figures 5-8. The switching sensors of the patented invention are used to signal based on the location or position of the assemblies.

Brian teaches the path of the carriages within the conveyor apparatus to be fixed but does not specify the path to be curvilinear, as per claim 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a curvilinear path so as to enable a more efficient and flexible transport means.

The association of a "first reactive element" with each of the carriages as in instant claim 3 is shown by the patented invention by driving each of the carriages with a horizontal drive motor, see column 10: lines 65-68.

The motion parameters of instant claim 4 to be one of force, acceleration, velocity, direction, position, torque, or jerk, is taught to be position, direction, and acceleration among others in the system of the patented invention. See column 10: lines 56-58.

The composition of the first active elements being electrically conductive coils to establish electromagnetic field for production of movement provided by linear motors is not taught or suggested by the patented invention to Brian. However, the reference of prior art to Prucher teaches the use of a system that employs a plurality of linear induction motors positioned along a track. The track as used by Prucher carries a plurality of carriers or carriages. As a carrier or carriage passes along the track, a reaction plate or reactive element that is affixed to the carrier passes over the stators of the linear induction motors. The interaction between the plate and the electromagnetic field generated within the motors results in a thrust that propels the carrier along the track. Thereby, satisfying the limitations of instant claim 5, see column 3:lines 30-55 of Prucher. Although the primary reference states at column 11: lines 18-25 the use of motors for affecting longitudinal and vertical travel of the carriage. In this regard, Prucher teaches the use of linear induction motors to effect motion through the system. Furthermore, it is well known that linear motors are comprised of coils for their functionality. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to have incorporated linear motors into the system of Brian for the sake of simplicity.

As per the limitations of instant claim 6, wherein the controller is set to control the enablement of the coils as a function of the location of each carriage so that each carriage is independently controlled, Prucher teaches this by positioning the motors to provide continuous electromagnetic contact with the reaction plate or reactive element. As the carrier or carriage leaves the command of one linear motor, it enters the charge of a subsequent motor.

With regard to the use of a multiplexer as per instant claim 16, see figures 5, 6, 7, and 40 of the Brian reference wherein switches are depicted as used.

Instant claims 7-15, 18-20, and 24-26 are directed to one or more additional paths, carriages, tools, or active elements. The reference of prior art to Brian teaches the use of a plurality of assemblies or carriages or tools as claimed by the instant invention. Specifically, Brian states in the abstract of the patented reference that the conveying apparatus consists of one or more independently movable carriages ... along a series of treating stations, and ... each carriage has one or more independently movable lift mechanisms....".

Brian teaches the independent movement of the carriages as in instant claim 17 as stated above with regard to instant claim 1. See column 9: line 59.

The limitations of instant claims 21-23 are rejected under the same basis as set forth above with regard to claims 1-4. Claims 21-23 claim the method used for the system of claims 1-4.

For the reasons stated above, the limitations of the claimed invention is taught or suggested by the prior arts of record; thereby, rendering the instant claims unpatentable.

#### ***Response to Arguments***

6. Applicant's arguments have been considered and addressed within the text of the above stated rejection of claims 1-29.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (703) 305-9766. The examiner can normally be reached Tuesday - Thursday from 9:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (703) 308-0538.

Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks  
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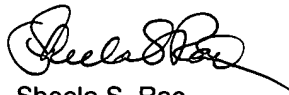
or faxed to:

**(703) 872-9306 for Official Communications**

hand-delivered responses should be brought to:

**Receptionist - Sixth Floor  
Crystal Park II, 2121 Crystal Drive, Arlington, Virginia**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

  
Sheela S. Rao  
March 30, 2004

  
ALBERT W. PALADINI  
PRIMARY EXAMINER